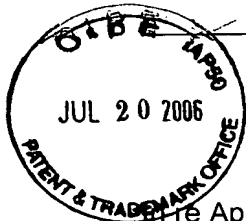


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of:
Susan Douglas et al

Serial No.: 10/525,126
based on PCT/CA2003/001323

Filed: February 18, 2005

For: A GENOMIC APPROACH TO
IDENTIFICATION OF NOVEL BROAD-
SPECTRUM ANTIMICROBIAL
PEPTIDES FROM BONY FISH

) Examiner: Woolwine
)
) Group Art Unit 1616
)
) Docket No.: 10914-25
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INFORMATION DISCLOSURE STATEMENT

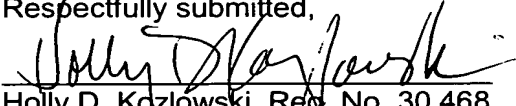
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Dear Sir:

In accordance with the provisions of 37 C.F.R. 1.56 and 1.97-1.98, Applicants cite the references listed on the attached Form PTO-1449. Copies of the non-U.S. patent references are enclosed.

Since this Statement is submitted prior to issuance of a first Official Action on the merits, no fee or certification is required. However, please charge any fee required in connection with this Statement to Deposit Account No. 04-1133.

Respectfully submitted,


Holly D. Kozlowski, Reg. No. 30,468
Attorney for Applicants
DINSMORE & SHOHL LLP
1900 Chemed Center
255 East Fifth Street
Cincinnati, Ohio 45202
(513) 977-8568

Application Number	10/525,126
Filing Date	February 18, 2005
First Named Inventor	Susan DOUGLAS
Group Art Unit	1616
Examiner Name	Woolwine
Attorney Docket Number	10914-25

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/525,126
		Filing Date	February 18, 2005
		First Named Inventor	Susan DOUGLAS
		Group Art Unit	1616
		Examiner Name	Woolwine
		Attorney Docket Number	10914-25
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OTHER NON PATENT LITERATURE DOCUMENTS			
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		Natl. Acad. Sci. U.S.A Biochem. 49 pp. 699-706.	
	7.	Cole, Alexander et al., "Characterization of a Fish Antimicrobial Peptide: Gene Expression, Subcellular Localization, and Spectrum of Activity", (2000), ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, v. 44, pp. 2039-2040.	
	8.	Cole, A. M., R. O. Darouiche, et al. (2000). "Characterization of a Fish Antimicrobial Peptide: Gene Expression, Subcellular Localization, and Spectrum of Activity." Antimicrobial Agents & Chemotherapy. 44 pp. 2039-2045.	
	9.	Cole, A. M., P. Weis, et al. (1997). "Isolation and Characterization of Pleurocidin, an Antimicrobial Peptide in the Skin Secretions of Winter Flounder." J. Biol. Chem. 272(18) pp. 12008-12013.	
	10.	Douglas et al., (2000). "Cloning and developmental Expression of a Family of Pleurocidin-like antimicrobial peptides from winter flounder, Pleuronectes americanus (Walbaum)", (2000), Developmental and Comparative Immunology, v. 25, pp.137-147.	
	11.	Douglas, S. E., J.W. Gallant et al. (1999). "Molecular investigation of aminopeptidase N expression in the winter flounder, Pleuronectes americanus." J. Appl. Ichthyol. 15 pp. 80-86.	
	12.	Douglas, S. E., J. W. Gallant, et al. (1999). "Winter Flounder Expressed Sequence Tags: Establishment of an EST Database and Identification of Novel Fish Genes." Mar. Biotechnol. 1 pp. 458-464.	
	13.	Douglas, S. E., J. W. Gallant, et al. (1998). "Isolation of cDNAs for trypsinogen from the winter flounder, Pleuronectes americanus." J. Mar. Biotechnol. 6 pp. 214-219.	
	14.	Douglas, S. E., J. W. Gallant, et al. (2001). "Cloning and developmental expression of a family of pleurocidin-like antimicrobial peptides from winter flounder, Pleuronectes americanus (Walbaum)." Dev. Comp. Immunol. 25 pp. 137-147.	
	15.	Douglas, S. E., A. Gawlicka, et al. (1999). "Ontogeny of the stomach in winter flounder: characterization and expression of the pepsinogen and proton pump genes and determination of pepsin activity." J. Fish Biol. 55 pp. 897-915.	
	16.	Douglas, S. E., S. C. M. Tsoi, et al. (2002). "Expressed Sequence Tags - A Snapshot of the Fish Genome". A Step Toward the Great Future of Aquatic Genomics, Tokyo, Japan.	
	17.	Fleming, R. E. and W. S. Sly (2001). "Hepcidin: A putative iron-regulatory hormone relevant to hereditary hemochromatosis and the anemia of chronic disease." Proc. Natl. Acad. Sci. USA 98(15) pp. 8160-8162.	
	18.	Goldman, M. J., G. M. Anderson, et al. (1997). "Human Beta-Defensin-1 Is a Salt-Sensitive Antibiotic in Lung That Is Inactivated in Cystic Fibrosis." Cell. 88 pp. 553-560.	
	19.	Gong, Z., K. V. Ewart, et al. (1996). "Skin Antifreeze Protein Genes of the Winter Flounder, Pleuronectes americanus, Encode Distinct and Active Polypeptides without the Secretory Signal and Prosequences." J. Biol. Chem. 271 pp. 4106-4112.	
	20.	Gudmundsson, G. H., D. A. Lidholm, et al. (1991). "The Cecropin Locus. CLONING AND EXPRESSION OF A GENE CLUSTER ENCODING THREE	

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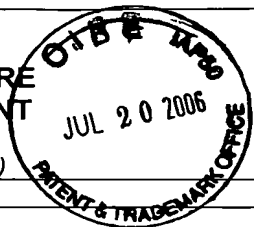
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		Group Art Unit	1616
		Examiner Name	Woolwine
		Attorney Docket Number	10914-25
Sheet	3 of 4		

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		ANTIBACTERIAL PEPTIDES IN HYALOPHORA CECROPLA." J. Biol. Chem. 166 pp. 11510-11517.	
	21.	Hwang, E.-Y., J.-K. Seo, et al. (1999). "Purification and Characterization of a Novel Antimicrobial Peptide from the Skin of the Hagfish, Eptatretus burgeri." J. Food Sci. Nutr. 4(1) pp. 28-32.	
	22.	Jach, G., B. Gornhardt, et al. (1995). "Enhanced quantitative resistance against fungal disease by combinatorial expression of different barley antifungal proteins in transgenic tobacco." Plant J. 8 pp. 97-109.	
	23.	Jia, X., A. Patrzykat, et al. (2000). "Antimicrobial Peptides Protect Coho Salmon from Vibria anguillarum Infections." Appl. Environ. Microbiol. 66 pp. 1928-32.	
	24.	Krause, A., S. Neitz, et al. (2000). "LEAP-1, a novel highly disulfide-bonded human peptide, exhibits antimicrobial activity." FEBS Lett. 480 pp. 147-150.	
	25.	Kuchler, K., G. Kreil, et al. (1989). "The genes for the frog skin peptides GLa, xexopsin, levitide, and caerulein contain a homologous export exon encoding a signal sequence and part of an amphiphilic peptide." Eur. J. Biochem. 179 pp. 281-285.	
	26.	Lauth, X., H. Shike, et al. (2002). "Discovery and Characterization of Two Isoforms of Moronecidin, a Novel Antimicrobial Peptide from Hybrid Striped Bass." J. Biol. Chem. 277 pp. 5030-5039.	
	27.	LeMaitre, C., N. Orange, et al. (1996). "Characterization and ion channel activities of novel antibacterial proteins from the skin mucosa of carp (Cyprinus carpio)." Eur. J. Biochem. 240 pp. 143-149.	
	28.	Moore, K. S., S. Wehrli, et al. (1993). "Squalamine: An aminosterol antibiotic from the shark." Proc. Natl. Acad. Sci. USA. 90 pp. 1354-1358.	
	29.	Nakayama, K. (1997). "Furin: a mammalian subtilisin/Kex2p-like endoprotease involved in processing of a wide variety of precursor proteins." Biochemical J. 327 pp. 625-635.	
	30.	Nicolas, G., M. Bennoun, et al. (2001). "Lack of hepcidin gene expression and severe tissue iron overload in upstream stimulatory factor 2 (USF2) knockout mice." Proc. Natl. Acad. Sci. USA. 98(15) pp. 8780-8785.	
	31.	Oren, Z. and Y. Shai (1996). "A class of highly potent antibacterial peptides derived from pardaxin, a pore-forming peptide isolated from Moses sole fish Pardachirus marmoratus." Eur. J. Biochem. 237(1) pp. 303-310.	
	32.	Padros, F., G. Minkoff, et al. (1993). "Histopathological Events Throughout the Development of Turbot (Scophthalmus maximus L.)." J. Comp. Pathol. 109 pp. 321-324.	
	33.	Padros, F., R. Sala, et al. (1991). "Organogenesis in turbot, Scophthalmus maximus, larvae related to the main developmental stages: in Larvi'91. Fish and Crustacean Larviculture Symposium. Ghent, Belgium: European Aquaculture Society.	
	34.	Park, C. B., J. H. Lee, et al. (1997). "A novel antimicrobial peptide from the loach, Misgurnus anguillicandatus." FEBS Lett. 411 pp. 173-178.	
	35.	Park, C. H., E. V. Valore, et al. (2001). "Hepcidin, a Urinary Antimicrobial Peptide Synthesized in the Liver." J. Biol. Chem. 276(11) pp. 7806-7810.	
	36.	Park, I. Y., C. B. Park, et al. (1998). "Parasin I, an antimicrobial peptide derived from	

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		histone H2A in the catfish, <i>Parasilurus asotus</i> ." FEBS Lett. 437(3) pp. 258-262.	
	37.	Pigeon, C., G. Ilyin, et al. (2001). "A New Mouse Liver-specific Gene, Encoding a Protein Homologous to Human Antimicrobial Peptide Hepcidin, Is Overexpressed during Iron Overload." J. Biol. Chem. 276(11) pp. 7811-7819.	
	38.	Rivas, L. and T. Ganz. (1999). "Eukaryotic antibiotic peptides: not only a membrane business." Drug Discovery Today. 4 pp. 254-256.	
	39.	Scott, M. G., C. M. Rosenberger, et al. (2000). "An α -Helical Cationic Antimicrobial Peptide Selectively Modulates Macrophage Responses to Lipopolysaccharide and Directly Alters Macrophage Gene Expression1." J. Immunol. 165 pp. 3358-3365.	
	40.	Shike H, Lauth X, Westerman ME, Ostland VE, Carlberg JM, Van Olst JC, Shimizu C, Burns JC (2002). "Bass hepcidin is a novel antimicrobial peptide induced by bacterial challenge." Eur J Biochem: 269 pp. 2232-2237.	
	41.	Silphaduang, U. and E. J. Noga (2001). "Peptide antibiotics in mast cells of fish." Nature 414 pp. 268-269.	
	42.	Smith, V. J., J. M. O. Fernandes, et al. (2000). "Antibacterial proteins in rainbow trout, <i>Oncorhynchus mykiss</i> ." Fish Shellfish Immunol. 10 pp. 243-260.	
	43.	Thompson, J., D. Higgins, et al. (1994). "CLUSTAL W: improving the sensitivity of progressive multiple sequence alignment through sequence weighting, position specific gap penalties and weight matrix choice." Nucleic Acids Res. 22 pp. 4673-4680.	
	44.	Trust T. J., Ishiguro, E. E., Chart, H. and Kay W. W. (1983) "VIRULENCE PROPERTIES of <i>Aeromonas salmonicida</i> ." J. World Maricul. Soc. 14 pp. 193-200.	
	45.	Valore, E. V., E. Martin, et al. (1996). "Intramolecular Inhibition of Human Defensin HNP-1 by Its Propiece." J. Clin. Invest. 97 pp. 1624-1629.	
	46.	Wu, M., E. Maier, R. Benz, and R. E. W. Hancock. (1999). "Mechanism of Interaction of Different Classes of Cationic Antimicrobial Peptides with Planar Bilayers and with the Cytoplasmic Membrane of <i>Escherichia coli</i> . Biochem. 38 pp. 7235-7242.	

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